

# B R E V I O R A

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### A NEW SPECIES OF *SPHAERODACTYLUS* FROM NORTHERN HAITI

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Although the genus *Sphaerodactylus* on Hispaniola is sufficiently diversified and confused to warrant at least a partial revision, the species here described is so remarkably different from any other form that I am confident in naming it at this time.

The new species is named for Mr. Benjamin Shreve of the Museum of Comparative Zoology for his current work on the sphaerodactyls of Hispaniola.

#### *SPHAERODACTYLUS SHREVEI* sp. nov.

*Type*: MCZ No. 62548, Mole Saint Nicolas, Haiti. Coll.: J. Lazell and A. S. Rand, 16 July, 1960.

*Diagnosis*: The combination of the following characters serves to distinguish this species from any other found in the Antilles: the presence of a highly convex snout as seen from the side (loreal region also somewhat convex); very large keeled dorsal scales beginning at the level of the axilla; and the paravertebral arrangement of these dorsals, producing a middorsal zone not of granules but of small and large, irregularly placed scales.

*Description of type*. Snout short. Eye nearer tip of snout than ear. Snout, as seen from the side, highly convex. Loreal region also somewhat convex. Rostral large with a partial median cleft. Nostril between rostral, first supralabial, a large supranasal (= internasal) and two small postnasals. A single scale between the supranasals (= internasals), which border the rostral posteriorly. Granular scales on top of snout somewhat larger than interocular or nape scales. Four supralabials, of

about equal length, to the center of the eye, followed by two smaller ones. Four infralabials gradually decreasing in size followed by two abruptly smaller ones. Mental short, wider than long, bordered posteriorly by two postmentals. Supraciliary spine small. Squamation of head and neck granular to the level of the shoulder; at that level a moderately rapid change to large, flattened, heavily keeled dorsals. Twenty-five dorsals from the level of the axilla to the posterior level of the hind limb. Five dorsals in the standard distance. A very ill-defined middorsal zone of smaller *keeled* scales not forming a continuous row but with the large dorsals meeting irregularly along the middorsal line. Middorsals subimbricate or not imbricating, the laterals more distinctly imbricating. Throat scales smooth, granular, juxtaposed. Chest and belly scales larger, smooth, cycloid, broadly imbricate, about nine ventral scales in standard distance. Scales of anterior surfaces of limbs imbricate, cycloid, smooth, somewhat smaller than ventrals. Scales of posterior surfaces of limbs granular, smooth. Digital pads approximately twice as broad as the subdigital lamellae. Ten infradigital lamellae under fourth toe. The type, the only specimen yet collected, lacks the tail. It is a female and the escutcheon therefore cannot be described.

*Coloration in life.* *S. shrevei* is a dull-colored animal with a pattern composed of three basic hues—each tending to be unique on an individual scale. There are very irregular dark grey-brown blotches across the dorsum: beginning at the back of the head there are three such markings to the shoulders. There are three more crudely "Y" shaped markings on the body, the most anterior of which bifurcates to the right, the remaining ones bifurcating to the left. There are two small blotches on the right side of the rump and one on the left. The second transverse blotch, on the nape, is broken by a light middorsal line that continues down through the fourth marking and then fades out. The ground color of the dorsum is ash grey. There are scattered over the dorsal surface short transverse series of white or partly white scales—from two to four in a row—that appear to have no correlation whatever with the rest of the animal's pattern. The top of the head is ash grey except for a very irregular, dark, grey-brown blotch on the parietal area. Coming back from the eye are two stripes, one of which runs downward across the cheek; the other nearly connects with the first transverse marking on the back of the head. Not

including the stripe across the cheek, there are five vertical dark markings across the pale labials, the anterior two of which are connected at the edge of the mandible. There are dark streaks on the lateral edges of the chin and throat, the underside of the hind limbs, and across the venter just anterior to the anus. The ventral surface is white; a close examination reveals that on each scale there are tiny black dots. This peppering becomes more noticeable laterally and posteriorly. Along each side of the animal is a line of partially connected, small, dark, grey-brown blotches; just ventral to this row is another composed of widely spaced, single, dark, grey-brown scales. All three of the animal's hues: white, grey and grey-brown, are simply variations in the intensity of speckling on each scale with tiny black or brown dots.

The pattern of the animal bears no resemblance to that of the young or females in the species to which it has been compared, or to any other *Sphaerodactylus* I have seen.

*Habitat.* The type specimen was taken from a large circular rock pile about two-and-one-half feet deep; this sort of rock pile is the result of removing the debris from a heap of charcoal after burning, and is composed of rocks that vary in size from that of a golf ball to nearly the size of a football. This particular heap was of some age, for even in the arid terrain of Mole Saint Nicolas several fair-sized thornbushes had sprouted up in it. Collecting was very difficult, for any animal uncovered could generally manage to dart back into the pile before the collector could safely ascertain that it was not a scorpion or some other unpleasant handful. In order to get best results we excavated areas through the pile, dividing it up into more manageable smaller piles; this system netted *Celestus*, *Typhlops*, and *Tropidophis*, as well as the type of *Sphaerodactylus shrevei*. Another specimen of apparently the same species escaped, leaving only its tail behind.

Due to the relative inaccessibility of peninsular north-western Haiti it may be some time before additional specimens can be obtained.

*Comparisons.* From *S. copei*, the only other comparably large-scaled Hispaniolan form, *S. shrevei* differs in the following characters: (1) Snout seen from the side highly convex; (2) No middorsal zone of granules; (3) Dorsal scales flatter, not swollen, apt not to imbricate, especially in the middorsal area; (4) Pattern a series of irregular dark dorsal blotches with

a line of often connected smaller blotches along each side; dorsal blotches broken by a light middorsal line anteriorly.

From *S. scaber* of Cuba, *S. shrevei* differs in all the mentioned characters and in snout length, which averages slightly shorter in the Cuban form.

*S. samanensis* Cochran of the Dominican Republic resembles *S. shrevei* somewhat in squamation but the dorsals are smaller and the ventrals larger. There are no smaller middorsal scales and the pattern is very different.

*S. shrevei* differs from *S. becki* of Navassa again in the absence of a middorsal zone of granular scales and in the flatness of the dorsal scales, which are rounded, swollen, and rather tubercular in *S. becki*.

Two Jamaican forms, *S. richardsoni* and *S. parkeri*, occasionally possess dorsal squamation similar to that of *S. shrevei* in that while there is no middorsal zone of granules there may be small scales irregularly scattered along the middorsal line, but in general the arrangement of the scales is much more regular and not of a paravertebral nature. From both of these species *S. shrevei* differs in the following characters: (1) Snout seen from the side highly convex; (2) Head granules extending posteriorly to level of axilla instead of just onto nape; (3) No enlarged, clearly defined canthal scale; (4) Pattern and coloration.

From *S. parkeri* it differs also in having only a single small scale between the internasals.

There is a vaguer resemblance to *S. shrevei* in some Lesser Antillean forms. *S. vincenti* and *S. microlepis*, for example, show a tendency towards reduction in size of the middorsal scales, but in these forms the pattern of squamation tends to be very regular and the scales are much smaller.

The new species has been compared with these forms largely because there are apparently no closer ones, although it bears little resemblance to any of them. Its relationships at the moment are not at all clear.

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TABLE 1

Comparison of the snout length ratios of six species of *Sphaerodactylus*. The ratio is obtained by dividing the standard distance (i.e., the distance from the center of the eye to the tip of the snout) into the distance from the center of the eye to the ear opening. The higher the figure obtained the shorter the snout.

	<i>Specimens</i>	<i>Mean Value</i>	<i>Range</i>
<i>S. richardsoni</i>	5	.72	.67-.81
<i>S. parkeri</i>	3	.76	.73-.78
<i>S. copei</i>	10	.76	.70-.80
<i>S. shrevei</i>	1	.80	-
<i>S. scaber</i>	6	.82	.71-.92
<i>S. becki</i>	4	.90	.78-1.00